

THE 2021 DEFENSE STRATEGY REVIEW AND MODERN STRATEGIC CONFLICT

Annotated Bibliography

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The 2021 Defense Strategy Review and Modern Strategic Conflict

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Key Questions:

- How should the upcoming defense strategy review account for the particular demands of regional wars with significant potential for multi-domain and trans-regional escalation?
- What are the essential ingredients of an effective counter-escalation strategy for the United States and its allies and partners?
- How should answers to these questions be integrated into broader defense strategy?

Panel Topics:

1. Understanding the Wars China and Russia Are Getting Ready to Fight
2. Understanding the Wars the United States and its NATO Allies are Getting Ready to Fight
3. Understanding the Wars the United States and its Northeast Asian Allies are Getting Ready to Fight
4. Integrating the Joint Warfight with the Strategic Domain
5. Ensuring the Needed Mix of Cost-Imposing Tools
6. Getting the Roles of Defenses Right
7. Resolve, Credibility, and Counter-Escalation Strategy
8. War Termination in Limited Wars
9. Toward a Better Result in 2021

Panel 1: Understanding the Wars China and Russia Are Getting Ready to Fight

- How do Chinese and Russian military thought define and account for the strategic dimension of modern warfare?
- How do they envision escalatory action to deter and defeat the United States and its allies and partners?
- What key dilemmas and/or decision points in crisis and war do Chinese and Russian war planners seek to impose on the United States and its allies and partners?

Johnson, Dave. "Russia's Conventional Precision Strike Capabilities, Regional Crises, and Nuclear Thresholds." *Livermore Papers on Global Security* no. 3, Livermore, CA: Center for Global Security Research, February 2018. <https://cgsr.llnl.gov/content/assets/docs/Precision-Strike-Capabilities-report-v3-7.pdf>

This Livermore Paper explores nuclear thresholds in Russian military doctrine, particularly how Russian thinking integrates the operational effects of conventional strikes with nuclear deterrence and coercion. Johnson concludes that Moscow views non-nuclear strategic weapons as a means of inflicting unacceptable damage in the early stages of conflict to force enemy capitulation, while still leaving decision-makers nuclear options. Politically, Russia may use nuclear uncertainty to impede decision-making and undermine alliances. The paper contributes to the debate about the place of "escalate-to-deescalate" strategies in Russian military thought and the prospects for nuclear employment in a regional confrontation with NATO.

Massicot, Dara. "Anticipating a New Russian Military Doctrine in 2020: What It Might Contain and Why It Matters." *War on the Rocks*, September 9, 2019. <https://warontherocks.com/2019/09/anticipating-a-new-russian-military-doctrine-in-2020-what-it-might-contain-and-why-it-matters/>

The article looks at the changes in Russian military posture since the release of the 2014 military doctrine. Massicot speculates that a new military doctrine is unlikely to change Russia's declared nuclear policy (i.e., "launch on attack" policy) but could lay out a "strategy of limited action" to include the limited use of nuclear weapons to achieve well-scoped objectives. The doctrine will likely emphasize the role of non-military methods in the achievement of political and strategic objectives. Massicot concludes that the United States and its allies should closely follow changes in Russian military doctrine, because even small modifications in its language and structure reflect shifts in Russian threat perceptions and provide indicators of Moscow's future activities.

Radin, Andrew, Lynn E. Davis, Edward Geist, Eugeniu Han, Dara Massicot, Matthew Povlock, Clint Reach, Scott Boston, Samuel Charap, William Mackenzie, Katya Migacheva, Trevor Johnston, and Austin Long. "The Future of the Russian Military: Russia's Ground Combat Capabilities and Implications for U.S.-Russia Competition." Santa Monica, CA: RAND Corporation, RR-3099-A, 2019. https://www.rand.org/pubs/research_reports/RR3099.html

The report posits that among Russian political and military elites there is a broad consensus regarding both the threats facing the country and the goals of security policy. To address these threats and achieve these goals, Russian strategy assigns five tasks to the armed forces: strategic deterrence; regional dominance; expeditionary operations; preparation in case of major war; and domestic stability. The report analyzes the trends in doctrine, spending, personnel, and recent operations, as well as the broader societal, political, economic, and demographic factors underlying Russian military power. The authors also discuss how long-range conventional strike, C4ISR, and air defense capabilities contribute to strategic deterrence.

Laird, Burgess. "War Control: Chinese Writings on the Control of Escalation in Crisis and Conflict." Washington, DC: Center for a New American Security, 2017. <https://s3.amazonaws.com/files.cnas.org/documents/CNASReport-ChineseDescalation-Final.pdf?mtime=20170328141457>

This paper provides a summary of Chinese writings on escalation control, an increasingly important topic in Chinese literature. Laird notes, however, that the main concern behind escalation control is not a fear of nuclear war, but rather the fear of economic fallout and domestic destabilization. The report also points out some key topics absent in Chinese literature. For example, PLA strategists do not discuss mechanisms by which crises and conflicts might escalate or acknowledge the importance of military principles, doctrines, and concepts in peace time or offensive actions in crisis. In the realm of nuclear deterrence, Chinese literature does not recognize that deterrent signaling may in fact be misunderstood by an adversary as a commitment to decisive military action and therefore lead to escalation.

Johnson, James Samuel. "China's Evolving Approaches to Nuclear 'War-Fighting': An Emerging Intense US-China Security Dilemma and Threats to Crisis Stability in the Asia Pacific." *Asian Security* 15, no. 3 (2019): 215-232. <https://www.tandfonline.com/doi/full/10.1080/14799855.2018.1443915>

Johnson's piece highlights how China's approach to nuclear warfighting is evolving. First, there is increasing convergence between China's offensive conventional strategy and its nuclear weapons doctrine. Second, Chinese approaches to strategic deterrence increasingly blur conventional and nuclear capabilities at all levels of escalation. This compression of the nuclear escalation ladder incentivizes preemptive tactics. Johnson argues that Chinese views on deterrence emphasize minimalism, ambiguity, flexibility, and patience. He concludes that Beijing's heightened threat perceptions may lower the nuclear threshold and precipitate the development of a formal, limited nuclear war-fighting doctrine.

U.S.-China Economic and Security Review Commission. "Chapter 2, Section 2: China's Military Modernization: Implications for the United States." in: *2018 Report to Congress*. Washington D.C.: U.S. Government Publishing Office, 2018. <https://www.uscc.gov/sites/default/files/2019-09/2018%20Annual%20Report%20to%20Congress.pdf>

Detailing the implications of the PLA's modernization efforts for the United States, the authors conclude that these efforts result in a force capable of contesting U.S. operations across all domains in the Asia-Pacific region. While the modernization efforts are still underway, the PLA may favor coercive tactics below the threshold of war. However, as the gap in military capabilities between China and the rest of the region widens and the threat of use of force increases, these tactics might be sufficient to impede U.S. interests in the region. Further improvement of PLA warfighting capabilities also heightens the risk of miscalculation.

Panel 2: Understanding the Wars the United States and its NATO Allies are Getting Ready to Fight

- How do the United States and its NATO allies account for the strategic dimension of modern warfare?
- What concepts inform their military thought on escalation in a regional conflict initiated by Russia?
- Are these concepts sound?
- As they adapt past deterrence practices to new challenges, what are their metrics of success?

Paulauskas, Kestutis. "The Alliance's Evolving Posture: Towards a Theory of Everything." *NATO Review*, July 6, 2018. <https://www.nato.int/docu/review/articles/2018/07/06/the-alliances-evolving-posture-towards-a-theory-of-everything/index.html>

Citing the Olympic motto, "Citius, altius, fortius" (Faster, Higher, Stronger), Paulauskas details NATO's evolving posture. He notes that although the attention and scrutiny of the expert community is welcome, it often overlooks the unique nature of NATO's business and mandate. He underlines that the Alliance has the resolve and ability to respond to any attack or aggression, but NATO will remain deliberately ambiguous as to the precise nature, scale, timing, domain(s), and target(s) of its response. According to Paulauskas, NATO needs to continue its adaptation by strengthening the military command structure, keeping the defense plans up to date, ensuring the ability to respond decisively across operational domains, better aligning the conventional and nuclear components, and urging more defence spending by Allies.

Kroenig, Matthew. "A Strategy for Deterring Russian De-Escalation Strikes." *Atlantic Council*, April 2018. https://www.atlanticcouncil.org/wp-content/uploads/2018/04/Nuclear_Strategy_WEB.pdf

Kroenig focuses on how the United States and its NATO allies can deter Russian nuclear de-escalatory strikes. First, The United States must demonstrate that its stake in a conflict is at least as great as Russia's. Second, NATO must also communicate that it is sufficiently resolved to engage in a competition in risk taking with Russia through limited nuclear use to defend its interests in Europe. Third, NATO must enhance its capabilities to make these threats credible by strengthening its conventional military force posture in Eastern Europe, deploying a limited regional missile defense in Europe, and increasing the flexibility of its nuclear forces to deter limited nuclear strikes. Altogether, in order to successfully deter Russia, NATO must make it clear that any nuclear strike will not lead to de-escalation but will only result in unacceptable costs for Russia.

Binnendijk, Hans, and David Gompert. "Decisive Response: A New Nuclear Strategy for NATO." *Survival* 61, No. 5 (2019): 113-120. <https://doi.org/10.1080/00396338.2019.1662119>

The authors argue that the combination of Russian hybrid warfare and increased reliance on nuclear weapons is dangerous for Western interests and international security. NATO needs to revisit its nuclear posture and better signal its resolve in order to effectively deter Russia. The article emphasizes that NATO must dissuade Russia from believing that by resorting to nuclear threats in a conflict it can deter NATO from attacking critical targets on Russia's territory. The authors propose a new nuclear strategy for NATO that they call "Decisive Response." According to the authors, the key to Decisive Response lies not in outsized arsenals of theater nuclear-delivery systems, but in unhesitating decision-making and action. The aim of this new approach is to dispel any doubts in Russia about NATO's willingness to carry through with nuclear retaliation.

Kulesa, Łukasz. "The Future of Deterrence: Effectiveness and Limitations of Conventional and Nuclear Postures" in "New Perspectives on Shared Security: NATO's Next 70 Years." Carnegie Europe, November 28, 2019. <https://carnegieeurope.eu/2019/11/28/future-of-deterrence-effectiveness-and-limitations-of-conventional-and-nuclear-postures-pub-80440>

Addressing present and future challenges to NATO's collective security, Kulesa organizes the argument around three dimensions of deterrence: who, what, and how. The "who" section recognizes that Russia is not the sole threat facing NATO; thus the Alliance needs to develop a tailored strategy to meet its needs. The "what" refers to the need to specify concrete actions that can be taken to enhance deterrence. He highlights cyberattacks as a point of ambiguity that needs to be more rigorously addressed in NATO's deterrence framework. The "how" section offers various recommendations, emphasizing that NATO does not need to mirror the activities of its adversaries to deter effectively.

Waitling, Jack, and Daniel Roper. "European Allies in US Multi-Domain Operations." *RUSI Occasional Paper*, October 2019.

https://www.rusi.org/sites/default/files/20190923_european_allies_in_us_multi-domain_operations_web.pdf

Russian and Chinese long-range precision fires, combined with integrated and layered long-range standoff capabilities, are able to shape the operational environment prior to conflict. These capabilities threaten to dislocate the deployment of U.S. forces across time, space, and function, preventing the United States from bringing sufficient forces to bear quickly enough to deter military action. In response, the U.S. Army has developed a new operating concept, "Multi-Domain Operations" (MDO). This concept calls for U.S. forces to have a calibrated force posture with the ability to operate across domains. The authors argue that there are a large number of dependencies upon allies embedded within this concept. In order to overcome the challenges of capability gaps and policy hurdles, allies need to be engaged throughout the process as MDO is transformed from concept to doctrine.

Barrie, Douglas, et al. "European Defence Policy in an Era of Renewed Great-Power Competition." London, UK: The International Institute for Strategic Studies, February 2020.

<https://www.iiss.org/-/media/files/research-papers/european-defence-policy-in-an-era-of-renewed-great-power-competition---iiss-research-report.pdf>

This IISS report argues that closing recognized European gaps in military capabilities will remain a difficult task through the coming decade. What makes this task even more difficult is that European states not only need to regenerate their defense and deterrence capabilities, but they also need to transform these capabilities for the digital age. However, it is possible to define the minimum effort required for both regeneration and innovation to be credible and to identify the capabilities that are robust. Enabling capabilities and command and control would facilitate better defence, and allow the United States to act more globally, perhaps in tandem with Europe. A new transatlantic bargain could be built on the notion that Europeans operate globally to help the United States with its various contingencies in exchange for a reconfirmed U.S. commitment to European security.

Panel 3: Understanding the Wars the United States and its Northeast Asian Allies are Getting Ready to Fight

- How do the U.S.-Japan and U.S.-ROK alliances account for the strategic dimension of modern warfare? How should they?
- What concepts inform their military thought on escalation in a regional conflict?
- Are these concepts sound?
- As they adapt past deterrence practices to new challenges, what are their metrics of success?

Townshend, Ashley, Brendan Thomas-Noone, and Matilda Steward. "Averting Crisis: American Strategy, Military Spending and Collective Defence in the Indo-Pacific." The United States Studies Center (USSC), Sydney, Australia: University of Sydney, 2019.

<https://www.ussc.edu.au/analysis/averting-crisis-american-strategy-military-spending-and-collective-defence-in-the-indo-pacific>

The authors call for the United States, Japan, and Australia to pursue capability aggregation and adopt a strategy of collective defense to deter China in anticipation of an era without American military primacy. Collective defense coupled with tripartite defense planning presents one of the best options to counter China's military advantages in Asia. China is ill-equipped to offset the totality of American, Japanese, and Australian forces across domains. Joint military exercises can develop the intellectual toolkit and operational experience to effectively contest China's anti-access/area denial capabilities that threaten to establish a fait accompli. "Middle powers" are vital partners in the US effort to preserve a favorable balance of power in Asia.

Beomchul, Shin. "South Korea's Military Readiness Under Moon." in *Korea Net Assessment: Politicized Strategy and Unchanging Strategic Realities*, edited by Chung Min Lee and Kathryn Botto. Washington, D.C.: Carnegie Endowment for Peace, 2020.

https://carnegieendowment.org/files/Korea_Net_Assesment_2020.pdf

Despite the initial diplomatic promise, joint U.S.-South Korean readiness and interoperability declined as both states navigated unpredictable political straits. Confidence-building measures failed to limit North Korea's nuclear ambitions, and the tactical consequences of canceled U.S.-South Korean military exercises limit Seoul's ability to deter North Korea. South Korean President Moon Jae-in's ambitious "Defense Reform 2.0" promises to improve South Korea's force structure in the air, naval, and space domains rather than relying on traditional ground forces. Nevertheless, readiness and interoperability have suffered due to political circumstances and it has derailed the ability of South Korea and the United States to coordinate combat operations.

Garlauskus, Markus, and Bruce Perry. "What an 'October Surprise' from North Korea Might Actually Look Like." *New Atlanticist*, October 1, 2020.

<https://www.atlanticcouncil.org/blogs/new-atlanticist/what-an-october-surprise-from-north-korea-might-actually-look-like/>

The authors contend that North Korea could upset the strategic balance on the Korean Peninsula and the defense of the U.S. homeland by developing and fielding a mobile ICBM with multiple re-entry vehicles. North Korea is not likely to deploy a new SLBM due to command and control constraints and the US competitive advantage in anti-submarine warfare. A mobile ICBM with multiple warheads provides Kim Jong Un with a new credibility that poses a dilemma for U.S. and South Korean missile defense capabilities. U.S. and South Korean policymakers must cooperate effectively to prevent testing of a mobile ICBM as well as stridently oppose any fielding of this missile system. A success with mobile ICBMs may embolden Kim Jong Un further, thus elevating the difficulty of containing his regime.

Harold, Scott W., et al. "The Thickening Web of Asian Security Cooperation: Deepening Defense Ties Among Allies and Partners in the Indo-Pacific." Santa Monica, CA: RAND Corporation, RR-3125-MCF, 2019.
https://www.rand.org/pubs/research_reports/RR3125.html

This RAND report analyzes defense realignments occurring across the Indo-Pacific, trends which pose both challenges and opportunities for U.S. readiness in East Asia. Dynamics ranging from domestic political factors to regional security cooperation drive new security policies for Japan and South Korea. Japanese policy makers anticipate a continued role for the United States in restraining China. Tokyo's investments in defense modernization are shaped by a desire to guarantee interoperability with the United States. Seoul's focus rests primarily on the 38th parallel. The Moon presidency's investments in South Korea's defense industrial base aim to deter North Korea and cooperate with like-minded Indo-Pacific states to bolster its alliance with the United States.

Murano, Masashi. "The Future of Deterrence Strategy in Long-Term Strategic Competition." in *Key Challenges in Japan's Defense Policy*, edited by Yuki Tatsumi and Pamela Kennedy. Washington, D.C.: Stimson Center, March 2020. <https://www.stimson.org/wp-content/uploads/2020/03/KeyChallengesInJapansDefensePolicy-March2020-V3-web.pdf>

Dismissing concerns of a security dilemma in Asia, Masashi Murano argues in favor a new Japanese force posture that blends offensive and defensive capabilities to impose costs on adversaries. China's anti-access/area denial capabilities and considerable increase in defense spending represent serious challenges for Japan's constitutionally mandated defense-oriented policy. Japan must adopt a competitive strategic concept that deploys a diverse array of offensive and defensive strategies to impose costs. Protecting the Japanese homeland requires a tactical shift to incorporate offensive capabilities—such as long-range strike missiles—alongside defensive weapons to muddy an adversary's calculations. The United States and Japan should ensure readiness on operational concepts that meet the threats of Asia's strategic environment.

Takahashi, Sugio. "Development of Gray-Zone Deterrence: Concept Building and Lessons from Japan's Experience." *The Pacific Review* 31, no. 6 (2018): 787-810.
<https://www.tandfonline.com/doi/full/10.1080/09512748.2018.1513551>

Due to debates within Japanese defense circles after China's recent assertiveness in the East China Sea, Japan is well poised intellectually to meet a new era of gray zone war. China's creeping maritime escalation in a bid to control the Senkaku Islands convinced Japanese policy makers of the necessity to rethink deterrence. Takahashi points to three solutions to gray zone tactics: 1) a fusion of deterrence by denial and deterrence by punishment, 2) a whole of government response, and 3) strategic flexibility for increased escalation. A tripwire may ultimately be required to halt creeping escalation if those three solutions fail. Embedding this conceptual framework into Japanese and U.S. operational readiness would bolster the allied defense posture and signal a commitment to deter China.

Panel 4: Integrating the Joint Warfight with the Strategic Domain

- In the development of the new Joint Warfighting Concept, how have potential escalatory actions of Red and Blue been accounted for?
- From a strategy perspective, what progress has been made in conventional/nuclear integration? In all-domain integration? In Blue/Green integration?

Warden, John K. "Conventional-Nuclear Integration in the Next National Defense Strategy." Washington, DC: Center for a New American Security, October 26, 2020.

<https://www.cnas.org/publications/commentary/conventional-nuclear-integration-in-the-next-national-defense-strategy>

Warden argues that the United States needs a strategy for fighting limited/regional wars with nuclear-armed adversaries. While DoD initiatives such as global integration and the development of a joint warfighting concept have begun the work of integrating planning across regional and functional areas, significant gaps remain. Planners need a better understanding of a potential opponent's escalation calculus. Plans must include common objectives and approaches, clear responsibilities, and appropriate C2 arrangements. The combatant commands should also explore a robust adaptive planning capability that can develop options to respond to adversary nuclear use. The next NDS should ensure effective operations under the threat of nuclear employment, and consider whether the United States has the right mix of capabilities to deter conflict and escalation.

Mauroni, Al. "Tearing Down the Nuclear Firewall." *War on the Rocks*, October 15, 2019.

<https://warontherocks.com/2019/10/tearing-down-the-nuclear-firewall/>

Mauroni argues that the United States is unprepared to fight a regional war with a nuclear-armed adversary. U.S. efforts to meet this challenge are limited by the lack of familiarity with nuclear-strategic concepts and traditions within the civilian and military defense community. Mauroni argues that the U.S. government needs to discuss nuclear capabilities and reliability more openly to improve policy and analyses. The secrecy surrounding U.S. nuclear capabilities and plans precludes public debate of strategic alternatives and hinders education of the broader defense community. The author concludes that, in order to gain the trust of policymakers and politicians, DoD needs to talk plainly about basic facts regarding nuclear weapons' capabilities, locations, and use.

Sexton, Adam, and Mark Cancian. "The Conventional Force Perspective: Nuclear Integration in Doctrine, Concepts, and Exercises." *Center for Strategic and International Studies—International Security at the Nuclear Nexus Series*, Washington, DC: Center for Strategic and International Studies, October 8, 2020. <https://defense360.csis.org/the-conventional-force-perspective-nuclear-integration-in-doctrine-concepts-and-exercises>

The authors consider the mechanics of conventional-nuclear integration through the lens of Joint Force doctrine, concepts and exercises. Full integration would result in the appearance of nuclear planning in the high-level Joint Chiefs of Staff Joint Publications that is read and consumed by the entire force, not just in subordinate doctrine used chiefly by specialist communities. Deeper integration is also needed in higher-level joint concepts, specifically those involving major operations and joint access that inform both future doctrine and exercises. Finally, integration would mean that simulated nuclear operations would be present not only in exercises directed by USSTRATCOM or in narrower exercises focused on training tactics, techniques, and procedures, but also in large-scale conventional exercises.

Garamone, Jim. "Global Integration Deserves More Attention, Selva Says." Department of Defense News, June 19, 2019. <https://www.defense.gov/Explore/News/Article/Article/1881159/global-integration-deserves-more-attention-selva-says>

In this article, the Vice Chairman of the Joint Chiefs of Staff assesses the progress of the Joint Force in moving toward global integration along the dimensions of planning, decision-making, force management, and force design. Selva discusses how the National Defense Strategy process and the designation of the Chairman of the Joint Chiefs as the agent responsible for global integration have driven a retooling of the Joint Staff's planning and operations functions, as well as the reinvigoration of the J-7 force design and strategy division. He also favorably assesses the greater participation of the combatant commanders and civilian leadership in exercises.

Peters, Robert, Justin Anderson, and Harrison Menke. "Deterrence in the 21st Century: Integrating Nuclear and Conventional Force." Center for the Study of Weapons of Mass Destruction, National Defense University, December 3, 2018. <https://wmdcenter.ndu.edu/Publications/Publication-View/Article/1703804/deterrence-in-the-21st-century-integrating-nuclear-and-conventional-force/>

According to the authors, potential adversaries believe advancing their nuclear forces is vital to their defense posture, both to prevail in negotiations or to confront the United States. Furthermore, these adversaries, including Russia, China, and North Korea, have integrated a nuclear dimension into various domains and phases of conflict. The authors argue that the United States must also think of conventional and nuclear deterrence as intertwined if it wants to counter the hybrid nuclear-conventional strategies of its adversaries. The authors highlighted the 2018 Nuclear Posture Review's call to "strengthen the integration of nuclear and non-nuclear military planning" and offered initial steps forward.

Greenwood, Tom and Pat Savage. "In Search of a 21st-Century Joint Warfighting Concept." *War on the Rocks*. September 12, 2019. <https://warontherocks.com/2019/09/in-search-of-a-21st-century-joint-warfighting-concept/>

The authors argue that the current approach to joint concept development is too decentralized to implement the requirements of the 2018 National Defense Strategy. While the current "bottom-up" approach has allowed for necessary focus on how the services can best combine, project, and leverage combat power across all domains, such an effort must be complemented by a "top-down" approach that reflects the holistic judgments of the Joint Staff senior leadership. A top-down perspective is necessary to ensure that the services are working together to conduct all-domain, large-scale, conventional operations around the globe.

Panel 5: Ensuring the Needed Mix of Cost-Imposing Tools

- In countering Red's strategy for escalation, what are the roles of strike systems?
- What are the different roles of different tools (kinetic and non-kinetic, nuclear and non-nuclear) from a strategy perspective?
- What are the particular roles of nuclear weapons?
- Do the United States and its allies and partners have the right mix? Are there critical gaps? Synergies?

Brown, Gerald C. "Deterrence, Norms, and the Uncomfortable Realities of a New Nuclear Age." *War on the Rocks*, April 20, 2020. <https://warontherocks.com/2020/04/deterrence-norms-and-the-uncomfortable-realities-of-a-new-nuclear-age/>

Brown examines the reasons why nuclear weapons states (NWS) would employ nuclear weapons. He argues that the effectiveness of the nuclear taboo is waning, citing evidence suggesting that general populations are in favor of using nuclear weapons if it prevents the death of soldiers. States are more likely to engage in non-proliferation talks if military power is relatively equal, the calculations are based more on strategic rather than moral grounds. In conflicts between NWS and non-NWS, using nuclear weapons can lead to faster, decisive victories before alliances and security umbrellas are triggered, regardless of existing no-first-use policies and commitments. He also contemplates the effectiveness of nuclear umbrellas, using China's possible invasion of Taiwan as a case study of the U.S. willingness to risk nuclear war over an arguably peripheral interest.

Harvey, John R. "Modernizing the U.S. Nuclear Arsenal: The Road to 2030 and Beyond." in: "Fit For Purpose? The U.S. Strategic Posture in 2030 and Beyond." *CGSR Occasional Papers*, Livermore, CA: Center for Global Security Research, October 2020: 16-27.

<https://cgsr.llnl.gov/content/assets/docs/The-US-Strategic-Posture-in-2030-and-Beyond.pdf>

This report underlines the importance of keeping the modernization of the U.S. nuclear arsenal on track while simultaneously maintaining an effective deterrent against emerging threats. Emphasizing resilience against both kinetic and non-kinetic threats to the arsenal, Harvey urges Congress, USSTRATCOM, and NNSA to both improve the existing arsenal as well as expand capabilities to counter emerging cruise and hypersonic missile threats from near-peer competitors. He argues that instead of preparing for the step-by-step escalation pattern that defined the Cold War, the most important aspects of modernization are strengthening command and control and delivery systems to withstand cyber attacks and formulating nuclear responses for unexpected use.

Wilkening, Dean. "Conventional Prompt Strike in 2030 and Beyond." in: "Fit For Purpose? The U.S. Strategic Posture in 2030 and Beyond." *CGSR Occasional Papers*, Livermore, CA: Center for Global Security Research, October 2020: 55-64.

<https://cgsr.llnl.gov/content/assets/docs/The-US-Strategic-Posture-in-2030-and-Beyond.pdf>

The two greatest benefits of a U.S. hypersonic missile arsenal are 1) the ability to penetrate territories previously guarded by integrated air defense systems, and 2) the shortening of the kill chain to strike time-sensitive targets. By maintaining an arsenal of thousands of hypersonic weapons, Wilkening argues the United States can impose significant costs on Russian and Chinese conventional capabilities and their nationwide infrastructure. Despite the fear that the compression of the kill chain is destabilizing to overall nuclear deterrence policy, Wilkening argues that increased ISR practices will help warfighters accurately determine their targets and avoid escalation by inadvertently choosing targets involved in Russia's or China's nuclear weapons production.

Bahney, Benjamin. "The Changing Role of Space in the U.S. Strategic Posture." in: "Fit For Purpose? The U.S. Strategic Posture in 2030 and Beyond." *CGSR Occasional Papers*, Livermore, CA: Center for Global Security Research, October 2020: 65-74.

<https://cgsr.llnl.gov/content/assets/docs/The-US-Strategic-Posture-in-2030-and-Beyond.pdf>

Looking to 2030, the future of space deterrence and strategic parity will rely upon increased systems vulnerability, analysis of adversary intent, and improvements in both space-based and counter-space capabilities. These changes will have lasting effects on both nuclear deterrence and conventional warfighting through growing ISR capabilities and sensor/satellite usage, all key facets of the 2020 national space policy. The expanded dependence of adversaries upon jamming and kinetic weapons to counter low-earth orbit systems will pose a significant threat to the communications and precision-tracking abilities of the United States and its allies. In response, Bahney calls for a push towards allied space interoperability and transferable ISR responsibilities, curbing adversary success in countering U.S. space hegemony and its security umbrella.

Colby, Elbridge. "Against the Great Powers: Reflections on Balancing Nuclear and Conventional Power." *The Strategist: Texas National Security Review* 2, no. 1 (November 2018).

<http://dx.doi.org/10.26153/tsw/864>

Looking ahead to potential future conflicts, Colby posits the United States should rely on a robust conventional arsenal instead of nuclear weapons. This would simultaneously defend against potential attack and deny the success of a *fait accompli* and also force the adversary to choose escalation or concession, albeit through making a choice about crossing the nuclear threshold or not. The end of Cold War apocalyptic thinking means that small defeats over marginal interests will no longer escalate to a nuclear threat, leaving effective deterrence strategies to be enacted at the conventional level. This entails incorporating allies into U.S. grand strategy and choosing a defensive mindset as opposed to a revisionist one, therefore pushing the burden of escalation onto competitors like Russia or China.

Cordesman, Anthony H. "Russia's New Nuclear Weapons: Whoever Dies with the Most Toys Wins?" Washington, DC: Center for Strategic and International Studies, 2018.

<https://www.csis.org/analysis/russias-new-nuclear-weapons-whoever-dies-most-toys-wins>

Cordesman contends that Russia's new hypersonic and nuclear-equipped cruise missiles will not upend existing strategic balances and deterrence theory but will instead achieve Vladimir Putin's goal of spotlighting advanced technology to elevate Russia back to a great power status. Refuting Putin's recent speeches on the matter, Cordesman counters the notion that U.S. missile defense is escalatory given that both sides' arsenals still far exceed the capability of existing defenses to wholly intercept an attack. Ultimately, the author concludes that Russia is more focused on the "toy factor" of fielding emerging technologies than their capability to decisively win future conflict.

Panel 6: Getting the Roles of Defenses Right

- What can missile defenses reasonably contribute in the near term to reduce Red's expected benefits of attack on Blue and Green? What can they not be expected to contribute?
- What more can and should be done to deter and defeat attacks of all kinds on the American homeland? Is "resilience" an adequate organizing concept?
- Do the United States and its allies and partners have the right mix of defensive capabilities? What goals should guide their further development?

Bernstein, Paul I. "Toward an Integrated Strategic Deterrent." in: "Fit For Purpose? The U.S. Strategic Posture in 2030 and Beyond." *CGSR Occasional Papers*, Livermore, CA: Center for Global Security Research, October 2020: 75-89. <https://cgsr.llnl.gov/content/assets/docs/The-US-Strategic-Posture-in-2030-and-Beyond.pdf>

Pulling from documents like the 2018 National Defense Strategy, Bernstein argues that the future for the U.S. military must be multi-domain integration, resulting in greater deterrence, increased options for national security leadership, and more avenues for navigating escalation risks. He calls for the adoption of a layered deterrence framework, outlining possible responses to threats of all levels while adhering to existing norms and "red lines." Designed to mitigate risk before conflict has begun, the framework will also rely upon an offense-defense integration where strategic defenses are concerned, including left-of-launch and quicker kill chains. The end result will be total conventional-nuclear integration, providing an effective deterrent against rapid escalation to the nuclear level.

Roberts, Brad. "Missile Defense: Fit for What Purpose in 2030?" in: "Fit For Purpose? The U.S. Strategic Posture in 2030 and Beyond." *CGSR Occasional Papers*, Livermore, CA: Center for Global Security Research, October 2020: 38-54. <https://cgsr.llnl.gov/content/assets/docs/The-US-Strategic-Posture-in-2030-and-Beyond.pdf>

Roberts questions the underlying premise of U.S. missile defense, the fielding of a defense capable of deterring rogue states but not robust enough to undermine the Russian and Chinese strategic deterrent. Given several major changes in the security environment, a simple linear forward progression on the past policy trajectory might not be adequate. Roberts provides three scenarios for future U.S. missile defense policy: 1) continuing to focus on addressing the rogue state threat, 2) looking towards the future and great power rivalry; and 3) shifting missile defense back towards protection against limited strikes. Ultimately, the current posture is only situationally fit for purpose through 2030, and policymakers must determine the true utility of missile defense. According to Roberts, the United States would be best served by a choice to restore but modify the goal of protection against limited strikes.

Obering III, Henry; and Rebecca Heinrichs. "Missile Defense for Great Power Conflict: Outmaneuvering the China Threat." *Strategic Studies Quarterly*. Vol. 13, No. 4 (Winter 2019): 37-56. <https://www.jstor.org/stable/10.2307/26815045>

Obering and Heinrichs recommend that the United States structure its future space capabilities to enhance its missile defense program to counter the increased Chinese reliance upon conventional cruise and ballistic missile systems. China views these systems as the optimal way of subverting U.S. power in the Indo-Pacific by targeting vulnerable U.S. military bases abroad. Unless countered by persistent missile defense efforts, the PLA Rocket Force will put U.S. presence in the region at a strategic disadvantage. Lastly, the authors argue that missile counter-strike capabilities will provide increased decisionmaking time during a conflict, a valuable edge given the rapidly growing speed of warfare.

Karako, Tom. "The 2019 Missile Defense Review: A Good Start." Washington, DC: Center for Strategic and International Studies, January 17, 2019. <https://www.csis.org/analysis/2019-missile-defense-review-good-start>

Karako praises the Department of Defense for specifying Russia and China as the main threats, the first time missile defense was explicitly noted as a deterrent against these particular countries. Karako also praises the MDR's incorporation of air defenses into the deterrence umbrella, an expansion from the 2010 MDR where U.S. air superiority was seemingly taken for granted. Furthermore, the MDR asserts that missile defense is inherently stabilizing, as it serves both an offensive and defensive purpose and provides an assurance of retribution against potential threats. However, Karako notes there is a glaring absence of new improvements to existing batteries, signaling a continuation of the technological status quo instead of a dynamic shift to face the increasingly threatening actions from adversaries.

Wilner, Alex. "Cyber deterrence and critical-infrastructure protection: Expectation, application, and limitation." *Comparative Strategy* 36, no. 4 (2017): 309-318. <https://doi.org/10.1080/01495933.2017.1361202>

This article looks at cybersecurity policy and critical-infrastructure protection through the lens of classical deterrence theory. Recent cybersecurity incidents involving the United States, China, Russia, and North Korea illustrate the gap between cyber deterrence expectations, applications, and results. By differentiating between physical and digital critical infrastructure protection, the article explores the promises and pitfalls of cyber deterrence in practice. Seven limitations are explored in detail, including: denying digital access, commanding cyber retaliation, observing deterrence failure, thwarting cyber misfits, addressing the cyber power of weakness, attributing cyber attacks, and solidifying red lines.

Zadra, Roberto. "NATO, Russia and Missile Defence." *Survival* 56, no. 4 (2014): 51–61.
<https://doi.org/10.1080/00396338.2014.941555>

Zadra begins by analyzing the failure of previous NATO-Russia talks on joint missile defense initiatives, claiming that the inability of the two parties to come to an agreement at the 2010 Lisbon Summit sparked the return of Cold War-like parity thinking. However, it is unlikely that European-based interceptors can undermine Russia's strategic arsenal. Instead, Russia is wary of a global U.S. missile defense architecture, which includes space dominance. According to Zadra, Russia used discussions with NATO as a proxy for talks with the United States. A return to NATO-Russia partnership discussions is unlikely, as any steps towards mutual reassurance with NATO are not adequate to reduce overall U.S. missile defense prominence. Besides, the lack of trust was exacerbated following NATO's response to Russian intervention in Ukraine and Crimea.

Panel 7: Resolve, Credibility, and Counter-Escalation Strategy

- How do Russia and China assess the resolve of the United States and its allies and partners to defend their interests generally? In an escalating regional conflict?
- Is there a credibility deficit? If so, are its sources temporary or enduring?
- Is declaratory policy a major or minor factor in shaping adversary perceptions of United States and allied resolve? What should the United States and its allies and partners say about their counter-escalation strategies to reinforce deterrence?

Kofman, Michael, Anya Fink, and Jeffrey Edmonds. "Russian Strategy for Escalation Management: Evolution of Key Concepts." Alexandria, VA: Center for Naval Analyses, 2020.
https://www.cna.org/CNA_files/PDF/DRM-2019-U-022455-1Rev.pdf

This CNA report looks at the evolution of escalation management and intra-war deterrence in Russian military strategy. Russia's strategic deterrence is built on a holistic approach to influence the decision making of its adversaries by military and non-military means. Russian military thinking on deterrence includes deterrence by fear inducement, deterrence through the limited use of military force, and deterrence by defense. In a conflict, Russian escalation management concepts can be divided into periods of demonstration, adequate damage infliction, and retaliation. Russian strategic culture emphasizes cost imposition over denial for deterrence purposes, and using forms of calibrated damage as a vehicle by which to manage escalation.

Ross, Jay. "Time to Terminate Escalate to De-Escalate — It's Escalation Control." *War on the Rocks*, April 24, 2018. <https://warontherocks.com/2018/04/time-to-terminate-escalate-to-de-escalateits-escalation-control/>

The author argues that the focus on Moscow's nuclear threshold and the "escalate to de-escalate" strategy is misguided and only represents one part of a larger strategic approach. According to Ross, Russia's approach to conflict is better described as "escalation control." Under this framework, Russia relies on carefully calculated, proactive measures to ensure a conflict is contained at lower, more acceptable levels. Through this approach Russia can control the level of conflict escalation, dominating the mechanics and circumstances of escalation rather than dominating conflict levels themselves. To address Russia's strategy, the West needs to dust off its understanding of escalation control, determine what is important enough to justify certain actions and risks, and then decide how or whether to communicate those thresholds.

Cunningham, Fiona S., and M. Taylor Fravel. "Dangerous Confidence? Chinese Views on Nuclear Escalation." *International Security* 44, no. 2 (2019): 61-109. https://www.mitpressjournals.org/doi/full/10.1162/isec_a_00359

Cunningham and Fravel focus on Chinese views of nuclear escalation. They argue that China is skeptical that escalation could be controlled after nuclear use, and therefore they are likely to be restrained from the limited use of nuclear weapons. China's operational doctrine and force structure both support this view. Space, cyber and conventional capabilities are likely to be used as alternative tools of strategic leverage. China's confidence that a conflict with the United States would not escalate to a nuclear crisis might prevent Beijing from identifying nuclear escalation risks, while the United States appears more confident that a nuclear escalation could be controlled. In an actual conflict, these different views might push the two countries into an unlimited nuclear war.

Lin, Bonny, et al. "Regional Responses to U.S.-China Competition in the Indo-Pacific: Study Overview and Conclusions." Santa Monica, CA: RAND Corporation, RR-4412-AF, 2020. https://www.rand.org/pubs/research_reports/RR4412.html

The authors argue that in the face of U.S.-China competition for influence in the Indo-Pacific, Southeast Asian countries view the United States as having more diplomatic and military influence and China as having more economic influence. However, regional states rank economic development over security concerns, and they are less worried about Chinese military threats. As a result, China can leverage its economic influence for a variety of goals, including to weaken U.S. military influence. To address this problem, the United States should work more effectively with its allies and partners in Southeast Asia. Effective coordination could help to pool resources, facilitate division of labor, counter PRC influence, and achieve U.S. objectives without asking regional countries to explicitly align themselves with the United States.

Gottemoeller, Rose. "NATO, Transatlantic Security, and the Future of Arms Control: A Conversation With Rose Gottemoeller." Washington, DC: Carnegie Endowment for International Peace, December 2019. <https://carnegieendowment.org/2019/12/05/nato-transatlantic-security-and-future-of-arms-control-conversation-with-rose-gottemoeller-event-7227>

In this talk, Gottemoeller emphasized that NATO continues to live by the spirit of the Harmel report and implements the dual-track decision in its policy vis-à-vis Russia. While the Alliance maintains a strong deterrence and defence posture, it also leaves the door open for dialogue. Gottemoeller also added that NATO's role is not simply to preserve the status quo in Europe but ultimately to change it. NATO will not stand still but continue to adapt and change to respond to circumstances political as well as military. The adaptation measures have already proven successful in three key areas: readiness and reinforcement, monitoring and surveillance, and defence spending. In order to stabilize relations with Russia, NATO will need to continue its adaptation and also advance a strong arms control agenda.

Colby, Elbridge. "How to Win America's Next War." *Foreign Policy*, May 5, 2019. <https://foreignpolicy.com/2019/05/05/how-to-win-americas-next-war-china-russia-military-infrastructure/>

This essay details what America must do to win its next war. Colby contends that if the United States does not adapt its defense strategy, it risks losing a war or having to back down in a crisis. He argues that past U.S. approaches to conflict will no longer be successful as Russia and China have tailored their strategies to counter American power projection capabilities. Colby argues that the United States must forgo further involvement in secondary conflicts and rethink U.S. relationships with allies. This should include increased burden sharing as U.S. forces are simply not large enough to adequately counter all threats.

Panel 8: War Termination in Limited Wars

- What would winning mean? What would success require?
- How might Red's willingness to accept Blue's off-ramps change after escalation?
- How might coalition partners, foreign and domestic, shape war termination choices?

Roberts, Brad. "Toward a Blue Theory of Victory." in: "On Theories of Victory, Red and Blue," *Livermore Papers on Global Security* no. 7, Livermore, CA: Center for Global Security Research, June 2020. <https://cgsr.llnl.gov/content/assets/docs/CGSR-LivermorePaper7.pdf>

Roberts examines theories of victory from the perspective of the United States, China, and Russia. A theory of victory is "distinct from, but integral to, strategy" and must provide a vision for an enduring peace. For the United States to develop this theory, Roberts suggests it should learn more about China and Russia, develop a generic theory in response to our adversaries' theories, and tailor it to specific regional contexts. To move forward, the United States needs to continue to adapt this theory and modernize its policy and posture reviews to better integrate new thinking.

Warden, John K. "Limited Nuclear War: The 21st Century Challenge for the United States." *Livermore Papers on Global Security*, no. 4. Livermore, CA: Center for Global Security Research, July 2018. https://cgsr.llnl.gov/content/assets/docs/CGSR_LP4-FINAL.pdf

Warden's paper examines how U.S. adversaries might approach limited nuclear war and gives suggestions for deterrence strategies. The author highlights the need for the United States and its allies to recommit their resolve in retaliating or preventing further escalation if an adversary crosses the nuclear threshold. The United States and its allies also need to create acceptable and credible offramps in case of escalation. The author also notes that the United States needs to strengthen its conventional capabilities in a nuclear environment to further deter adversaries.

Manzo, Vincent A. "After the First Shots: Managing Escalation in Northeast Asia." *Joint Force Quarterly* no. 77 (2015): 91-100. https://ndupress.ndu.edu/Portals/68/Documents/jfq/jfq-77/jfq-77_91-100_Manzo.pdf

This article advocates for a set of criteria for assessing escalation risks in Northeast Asia. It emphasizes demonstrating resolve and creating high-risk situations to prevent escalation. The author highlights the importance of adversary perception, particularly with North Korea. In the case of China, a declaratory and employment policy of early restraint in space and cyberspace would be important to manage a potential conflict. Overall, the United States needs to match its rhetoric and actions to manage escalation.

Krepinevich Jr., Andrew. "Protracted Great Power War: A Preliminary Assessment." Washington, DC: Center for a New American Security, February 5, 2020.

<https://www.cnas.org/publications/reports/protracted-great-power-war>

This CNAS report outlines what needs more attention in the next defense strategy and how to prepare for potential escalation. It argues that the United States needs to shift to a forward defense posture, giving it the capability to escalate conflict horizontally. Maintaining an advantage to escalate conflict horizontally and having the ability to leverage the assets of US allies is key to deterring China and Russia. Going forward, the United States needs to make net assessments of key elements of the strategic balance, the mobilization balance in the Western Pacific and European theaters, and the economic warfare balance, specifically in cyber warfare.

Hurst, Jules. "Four Paths: How Interstate Competition Ends." *The Strategy Bridge*, February 24, 2020. <https://thestrategybridge.org/the-bridge/2020/2/24/four-paths-how-interstate-competition-ends?format=amp>

Hurst suggests that there are four ways competition ends: 1) a decisive military conflict, 2) a decisive economic advantage, 3) fiscal exhaustion or collapse, or 4) domestic political changes. He argues that alliances and partnerships can increase economic and military power that could significantly change a competition's trajectory. In order to win a competition, the United States must exploit the system-level flaws of its competitors and increase its own advantages, especially through alliances.

Manzo, Vince A., and John K. Warden. "After Nuclear First Use, What?" *Survival*, Vol. 60, No. 3 (2018): 133-160. <https://www.tandfonline.com/doi/full/10.1080/00396338.2018.1470770>

Manzo and Warden evaluate scenarios and possible U.S. responses to nuclear first use from Russia and North Korea. They argue that the United States has few credible responses because of adversary interpretation and the needs of allies. However, there is an opportunity for international support and a re-setting of norms if the United States does not use nuclear weapons in a counter-attack. The authors argue that the United States needs to make preparations for the failure of nuclear deterrence to minimize the risk of escalation. The United States and its allies need an overarching strategy to include off-ramps and other mechanisms to bring the conflict to an end. To inform the debate about nuclear modernization, the United States must evaluate the forces mostly needed in case deterrence fails.

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- *The Demise of the INF Treaty and Indo-Pacific Security*, July 2019.
- *Deterrence Strategies and European Security*, Wilton Park, June 2019.
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- *Space in 21st Century Conflict: Calibrating Risks, Tailoring Strategies*, March 2018.
- *Strengthening Deterrence for 21st Century Strategic Conflicts and Competition: Accelerating Adaptation and Integration*, November 2017.
- *U.S. Extended Deterrence in Europe and in the Asia-Pacific: Similarities, Difference, and Interdependencies*, November 2017.
- *Rethinking Deterrence and Assurance. Western Deterrence Strategies: At an Inflection Point?*, Wilton Park, June 2017.
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- *3rd Annual Cross-Domain Deterrence Seminar: Towards Integrated Strategic Deterrence*, November 2016.
- *Space and the Third Offset*, August 2016.
- *2nd Annual Cross-Domain Deterrence Seminar Report*, November 2015.
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